

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8

1595 Wynkoop Street Denver, CO 80202-1129 Phone 800-227-8917 www.epa.gov/region8

Ref: 8ENF-UFO

OCT 6 - 2016

<u>CERTIFIED MAIL</u> <u>RETURN RECEIPT REQUESTED</u>

Mr. Les Farnsworth, District Supervisor Petroglyph Operating Company, Inc. 4116 W 3000 S Ioka Lane P.O. Box 607 Roosevelt, Utah 84066

Re: Underground Injection Control (UIC); Notice of Violation: Loss of Mechanical Integrity for the Ute Tribal 16-10 Well (EPA Permit ID# UT20736-04503, API # 43-013-31851) – Antelope Creek Oil Field, Duchesne County, Utah

Dear Mr. Farnsworth:

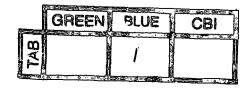
On October 3, 2016, the Environmental Protection Agency learned by mail from Nicole Colby that the Petroglyph Operating Company, Inc. injection well referenced above lost mechanical integrity on August 29, 2016. Pursuant to the above-referenced UIC Permit and Title 40 of the Code of Federal Regulations Section 144.51(q)(1) (40 C.F.R. § 144.51(q)(1)), you must establish and maintain mechanical integrity. A loss of mechanical integrity is a violation of this requirement.

Pursuant to the above-referenced UIC Permit and the regulations at 40 C.F.R. § 144.51(q)(2), you must immediately cease injection into this well. Before injection may resume, you must demonstrate that the well has mechanical integrity by passing a mechanical integrity test (MIT). You must also receive written authorization from the EPA.

Within thirty (30) days of receipt of this letter, please submit a letter describing what action you intend to take regarding the well, including a time frame in which you anticipate the work to be completed. It is expected that you will return this well to compliance within ninety (90) days of the loss of mechanical integrity.

If you choose to plug and abandon this well, the approved plugging and abandonment plan that is incorporated into the permit must be followed. Any deviation from that plan must be submitted to the EPA for approval prior to the plugging operation.

Any failure to comply with the UIC regulations found at 40 C.F.R. parts 144, 146, and 148 is subject to enforcement by the EPA, as provided in section 1423 of the Safe Drinking Water Act, 42 U.S.C. § 300(h)(2).



If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Suzanne J. Bohan

Assistant Regional Administrator
Office of Enforcement, Compliance
and Environmental Justice

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant Uintah & Ouray Business Committee bcc: Randy Brown (8P-TA)
Gary Wang (8ENF-UFO)

Cc addresses:

Shaun Chapoose, Chairman Uintah & Ouray Business Committee P.O. Box 70 Fort Duchesne, Utah 84026

Reannin Tapoof, Executive Assistant Uintah & Ouray Business Committee P.O. Box 70 Fort Duchesne, Utah 84026 Edred Secakuku, Vice-Chairman Uintah & Ouray Business Committee P.O. Box 70 Fort Duchesne, Utah 84026

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D. Is delivery address different from item 1?			
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cted Delivery? (Extra Fee)			

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70	Restrict (Endorse	Mr. Les F	arnsworth, Distri	ct Supervisor	
U	Total	Petroglyp	h Operating Con	npany, Inc.	
П	Sent To	4116 W 3	000 S loka Lane		
	Street,	P.O. Box	607		
7	or PO E City, Sta	Roosevelt	, UT 84066		
	PS Form	3800, August 20	D6	See Reverse for Insti	ructions



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> Edred Secakuku, Vice-Chairman Uintah & Ouray Business Committee

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY **REGION 8**

1595 Wynkoop Street Denver, CO 80202-1129 Phone 800-227-8917 www.epa.gov/region8

Ref: 8ENF-W-SDW

NOV 1 0 2016

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor Petroglyph Operating Company, Inc. 4116 W 3000 S Ioka Lane P.O. Box 607 Roosevelt, Utah 84066

> Re: Underground Injection Control (UIC); Permission to Resume Injection for the Ute Tribal 16-10 Well (EPA Permit ID # UT20736-04503, API # 43-013-31851) -- Antelope Creek Oil Field, Duchesne County, Utah

Dear Mr. Farnsworth:

On November 9, 2016, the Environmental Protection Agency received information by mail from Nicole Colby on the above referenced well concerning the workover to address a loss of mechanical integrity on November 9, 2016, and the follow-up mechanical integrity test (MIT) conducted on October 26, 2016. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations section 144.51(q)(2) (40 C.F.R. § 144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before October 26, 2021.

Pursuant to 40 C.F.R. § 144.52(a)(6), if the well is not used for a period of at least two (2) years (temporary abandonment), it shall be plugged and abandoned unless the EPA is notified and procedures are described to the EPA ensuring the well will not endanger underground sources of drinking water (non-endangerment demonstration) during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

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anne J. Bohan

Assistant Regional Administrator Office of Enforcement, Compliance

BLUF

CBI

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> Edred Secakuku, Vice-Chairman Uintah & Ouray Business Committee

> Reannin Tapoof, Executive Assistant Uintah & Ouray Business Committee

bcc:

Randy Brown (8P-TA) Gary Wang (8ENF-W-SDW)

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Fort Duchesne, Utah 84026

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Edred Secakuku, Vice-Chairman Uintah & Ouray Business Committee P.O. Box 70 Fort Duchesne, Utah 84026

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
 Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Signature X Multur Dudde
1. Article Addressed to: NOV 1 5 2016 Mr. Les Farnsworth, District Supervisor Petroglyph Operating Company, Inc.	D. Is delivery address different from item 1? Yes If YES, enter delivery address below: No
4116 W 3000 S loka Lane P.O. Box 607 Roosevelt, UT 84066	3. Service Type Certified Mail Registered Return Receipt for Merchandise C.O.D.
2. Article Number 701	4. Restricted Delivery? (Extra Fee) Yes 2 2210 0000 5367 9874

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LJ LJ			District Supervisor
ш	Total Posta(Pet	oglyph Operating	Company, Inc.
ги	Sent To 411	6 W 3000 S loka I	Lane
07	Street, Apt. No	Box 607	
~	or PO Box No City, State, Zh	sevelt, UT 84066	
	PS Form 3800, Augus	2006	See Reverse for Instructions



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8

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Suzanne J. Bohan Assistant Regional Administrator Office of Enforcement, Compliance and Environmental Justice

				SiDeJans			
CES	Author + ext.	Print 1st initial + last name	6 Wito	& Calence			
URREN	Doelle	Office code	CRUP WISDW				
)NC	6198		Walls	11/10/14			

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Inspection Report For Well: UT20736 - 04503

U.S. Environmental Protection Agency Underground Injection Control Program, 8ENF-T 999 18th Street, Suite 300, Denver, CO 80202-2466

This form was printed on 9/24/2013

12 Date: 10/ (2013 INSPECTOR(S): Lead: Roberts, Sarah Time: 11:16 Others: Ajayi, Christopher am/pm OPERATOR (only if different): REPRESENTATIVE(S): PRE-INSPECTION REVIEW Petroglyph Operating Company, Inc Ute Tribal 16-10 Well Name: Well Type: Enhanced Recovery (2R) Operating Status: AC (ACTIVE) as of 12/31/2002 Oil Field: Antelope Creek (Duchesne) Location: NWSE S16 T5S R3W X, Uintah and Ouray Indian Country: 2030 / Last Inspection: 8/28/2012 Allowable Inj Pressure: Last MIT: Pass 11/4/2010 Annulus Pressure From Last MIT: 1070 BLACK = POSSIBLE VIOLATION **INSPECTION TYPE:** Other Construction / Workover Response to Complaint (Select One) Plugging Routine Post-Closure Witness MIT **OBSERVED VALUES:** Gauge Owner: **EPA** Tubing Gauge: Yes Pressure: Gauge Range: Operator No psig Yes Gauge Owner: EPA Annulus Gauge: Pressure: psig Operator psig No Gauge Range: **EPA** Gauge Owner: Bradenhead Gauge: Yes Pressure: psig Operator No Gauge Range: psig Gauge Owner: **EPA** Pump Gauge: Yes Pressure: psig No psig Operator Gauge Range: ICIS Entered Operating Status: Active Not Injecting Plugged and Abandoned (Select One) Under Construction te Being Reworked Production Initials U2 Entered See page 2 for photos, comments, and site conditions LUE CBI Page 1 of 2

Inspection Report For Well: UT20736 - 04503 (PAGE 2)

PHOTOGRAPHS:		List of photos ta					
	No						
Comments and site	conditions	observed dur	ing inspection	on:			
GPS: GPS File ID: _							
				ân.			
Signature of EPA Inspect	tor(s):	XX		flim	Mymm		,
Data	a Entry		Compliance St	taff	Hard Cop	by Filing	

NOTICE OF INSPECTION



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION VIII, 999 18TH STREET - SUITE 500 DENVER, COLORADO 80202-2405

Date: 12/16/13 Hour: 8:00a	Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300f et seq.).
Firm Name:	Petrochyph Operating Inc.
Firm Address:	Roosevelt, UT, Antelope (reet Oil Field)

REASON FOR INSPECTION:

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable condition of permit or rule authorization.

SECTION 1445(b) of the SAFE DRINKING WATER ACT is quoted below:

Section 1445(b)(1): Except as provided in Paragraph (2), the Administrator, or representatives of the Administrator duly designated by him, upon presenting appropriate credentials, and a written notice to any supplier of water or other person subject to (a), or person subject (A) a national primary drinking water regulation prescribed under Section 1412(B) an applicable Underground Injection Control Program, or (C) any requirement to monitor an unregulated contaminant pursuant to subsection (a), or person in charge of any of the property of such supplier or other person referred to in clause (A), (B), or (C), is authorized to enter any establishment, ... facility, or other property of such supplier or other person in order to determine whether such supplier or other person has acted or is acting in compliance with this title, including for this purpose, inspection, at reasonable times, of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water system, including its raw water The Administrator or the Comptroller General (or source. any representative designated by either) shall have access for the purpose of audit and examination to any records, reports, or information of a grantee which are required to be maintained under subsection (a) or which are pertinent to any financial assistance under this title

Inspector's Name & Title (Print)

Inspector's Signature

\$EPA

United States Environmental Protection Agency Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee Petroglyph Operating Company, Inc. 2258 P.O. Box 7608 Boise, Idaho 83709

Name and Address of Surface Owner Ute Indian Tribe

P.O. Box 70

Ft. Duchesne, Utah, 84026

Permit Number State County Locate Well and Outline Unit on Duchesne UT2736-04503 Utah Section Plat - 640 Acres Surface Location Description 1/4 of NW 1/4 of SE 1/4 of Section 16 Township 5S Range 3W 1/4 of Locate well in two directions from nearest lines of quarter section and drilling unit Location 1728 ft. frm (N/S) S Line of quarter section U2 Entered and 1881ft, from (E/W) E Line of quarter section. WELL ACTIVITY TYPE OF PERMIT F Individual Brine Disposal Initial X Area X Enhanced Recovery Number of Wells 111 Hydrocarbon Storage BLUE GREENI Well Number UTE TRIBAL 16-10 Lease Name Ute Indian Tribe MAB S

TUBING - CASING ANNULUS PRESSURE

		INJECTION	PRESSURE	TOTAL VOLUME	INJECTED	(OPTIONAL M	IONITORING)
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	16	1919	1937	249		0	0
February	16	1974	1989	462		0	0
March	16	1985	1992	466		0	0
April	16	1963	1981	311		0	0
May	16	1974	1991	401		0	0
June	16	1940	1981	193		0	0
July	16	1965	1975	327		0	0
August	16	1941	1969	278		0	2000
September	16	1812	1838	0		0	1875
October	16	871	1313	0		0	2040
November	16	1546	1716	341		0	0
December	16	1681	1824	271		0	1560

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)	Signature		Date Signed
Chad Stevenson, Water Facilities Supervisor	0	5-7-	03/21/2017
	$A \cap A \cap A \cap A$		Annual of the same and the same

Petroglyph Operating Company, Inc. **Annulus Pressure Cause and Mitigation Measures** EPA Annual Injection Report for Reporting Period 2016

Well Name:

Ute Tribal 16-10

UIC Permit Number: UT2736-04434

API Number:

43-013-31851

Cause of Pressure and Mitigation Measures:

This well lost mechanical integrity on August 29, 2016, and a rig was placed on the well from October 13, 2016 to October 21, 2016. A successful Mechanical Integrity Test was submitted on October 26, 2016. Upon approval, injecting began November 11, 2016.

Please see copy of attached notice and successful MIT test submitted to EPA on October 26, 2016.



Multi-Chem Analytical Laboratory

1553 East Highway 40 Vernal, UT 84078

Units of Measurement: Standard



A HALLIBURTON SERVICE

Water Analysis Report

Production Company:

PETROGLYPH OPERATING CO INC - EBUS

Well Name: Sample Point:

Sample Date:

Sample ID:

UTE TRIBAL 16-10 INJ, DUCHESNE

Well Head

1/6/2017

WA-345415

SNF

Sales Rep: James Patry

Lab Tech:

Kaitlyn Natelli

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specif	fics
Test Date:	1/23/2017
System Temperature 1 (°F):	300
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	130
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0001
pH:	7.90
Calculated TDS (mg/L):	4113.21
CO2 in Gas (%):	
Dissolved CO ₂ (mg/L)):	20.00
H ₂ S in Gas (%):	
H2S in Water (mg/L):	0.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics							
Cations	mg/L	Anions	mg/L				
Sodium (Na):	1225.34	Chloride (CI):	1000.00				
Potassium (K):	7.69	Sulfate (SO4):	80.00				
Magnesium (Mg):	22.60	Bicarbonate (HCO₃):	1708.00				
Calcium (Ca):	43.93	Carbonate (CO ₃):					
Strontium (Sr):	1.54	Hydroxide(HO):					
Barium (Ba):	6.34	Acetic Acid (CH3COO)					
Iron (Fe):	4.57	Propionic Acid (C2H5COO)					
Zinc (Zn):	0.63	Butanoic Acid (C3H7COO)					
Lead (Pb):	0.07	Isobutyric Acid ((CH ₃) ₂ CHCOO)					
Ammonia NH3:		Fluoride (F):					
Manganese (Mn):	0.14	Bromine (Br):					
Aluminum (AI):	0.33	Silica (SiO2):	12.36				
Lithium (Li):	2.64	Calcium Carbonate (CaCO3):					
Boron (B):	1.21	Phosphates (PO ₄):	8.00				
Silicon (Si):	5.78	Oxygen (O2):					

Notes:

(PTB = Pounds per Thousand Barrels)

			cium onate	Barium	Sulfate		on Ifide		ron onate		osum 4-2H2O		estite SO4		alite IaCl		inc Ifide
Temp (°F)	PSI	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ
130.00	50.00	1.25	33.38	1.32	3.59	0.00	0.00	2.43	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149.00	267.00	1.32	34.12	1.22	3.54	0.00	0.00	2.54	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168.00	483.00	1.43	35.11	1.15	3.49	0.00	0.00	2.67	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187.00	700.00	1.55	35.94	1.10	3.46	0.00	0.00	2.80	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206.00	917.00	1.68	36.61	1.06	3.43	0.00	0.00	2.93	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224.00	1133.00	1.81	37.14	1.04	3.42	0.00	0.00	3.05	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243.00	1350.00	1.95	37.52	1.03	3.41	0.00	0.00	3.17	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262.00	1567.00	2.10	37.81	1.04	3.41	0.00	0.00	3.28	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281.00	1783.00	2.24	38.01	1.05	3.42	0.00	0.00	3.38	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	2000.00	2.39	38.15	1.07	3.44	0.00	0.00	3.47	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



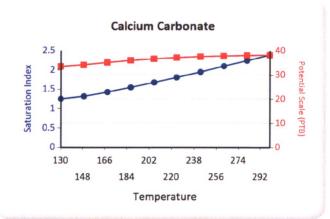
A HALLIBURTON SERVICE

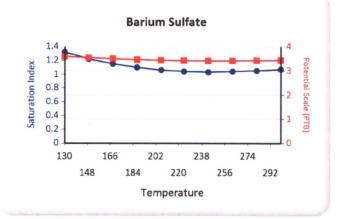
Water Analysis Report

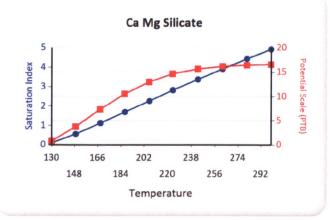
		Hemihydrate CaSO4~0.5H2O		SECOND PROPERTY AND ADDRESS OF THE PARTY AND A					THE RESERVED FOR THE PARTY OF T		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19	0.40	0.00	0.00	1.22	7.77	0.09	0.76	7.28	3.54	
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42	0.41	0.00	0.00	2.05	12.92	0.55	3.74	7.83	3.54	
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	1.65	0.41	0.00	0.00	3.03	18.92	1.12	7.34	8.55	3.55	
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	1.86	0.42	0.00	0.00	4.00	24.06	1.69	10.51	9.29	3.55	
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.42	0.00	0.00	4.96	27.89	2.26	12.97	10.04	3.55	
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	2.24	0.42	0.00	0.00	5.90	30.25	2.82	14.62	10.78	3.55	
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40	0.42	0.00	0.00	6.81	31.40	3.37	15.61	11.52	3.55	
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	2.55	0.42	0.00	0.00	7.70	31.84	3.91	16.14	12.24	3.55	
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	2.68	0.42	0.00	0.00	8.55	31.99	4.43	16.42	12.94	3.55	
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	2.79	0.42	0.00	0.00	9.36	32.04	4.92	16.56	13.61	3.55	

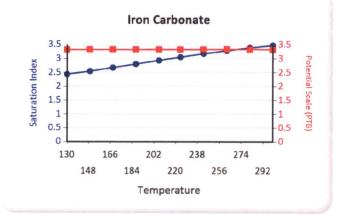
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate



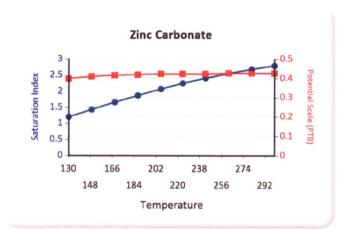


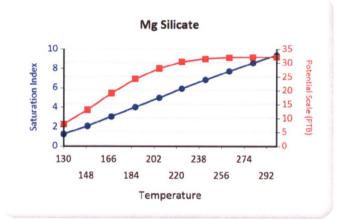


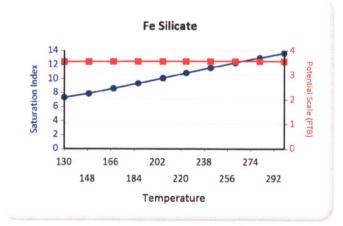




Water Analysis Report









RECEIVED

JUN 05 2017

May 19, 2017

Office of Enforcement, Compliance and Environmental Justice (Water)

Gary Wang or Don Breffle
Underground Injection Control Enforcement
U.S. Environmental Protection Agency
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE:

Mechanical Integrity Test: Ute Tribal 16-10

UT 20736-04503

Mr. Wang/ Mr. Breffle:

Please find enclosed a Mechanical Integrity Test for the Ute Tribal 16-10.

If any questions, please contact Les Farnsworth at (435) 609-6976.

Best Regards,

Nicole Colby

Manager, Land & Regulatory Compliance

GREEN 3

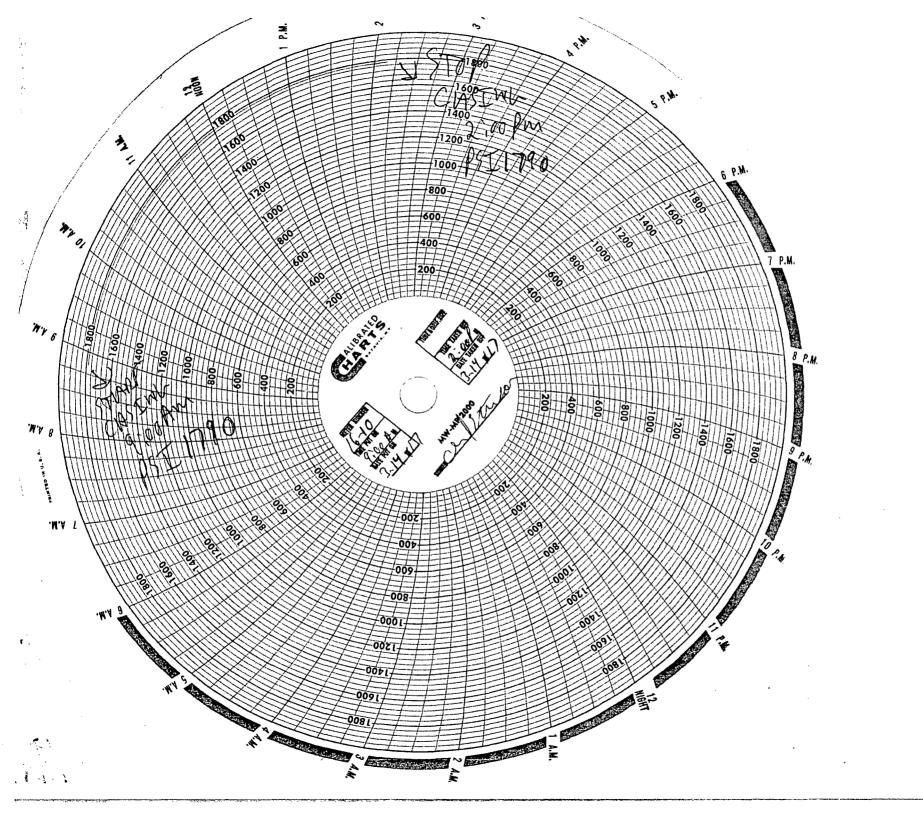
U2 Entered

Initial ____

Mechanical Integrity Test Tubing/Casing Annulus Pressure Test U.S. Environmental Protection Agency Underground Injection Control Program 1595 Wynkoop Street, Denver, CO 80202

EPA Witness: Test conducted by: CHIAD STEVENIS UN Others present:	Date: <u></u>	
Well Name: 16-10 Field: AWTELOPE (REEK	Type: ER SWD Status: AC	TA UC
Location: 16-10 Sec: T_N/S R_Operator: 16-100G(91)	E/W County: NACHES NE State	: UT
	owable Pressure:	_PSIG
Regularly scheduled test? Initial test for permit? Test after well rework?	[] Yes [] No	
Well injecting during test? If Yes, rate:	bpd	
Pre-test annulus pressure:	psig	

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		PRESSURE	RECORD
Initial Pressure	/050 psig	psig	psig
End of test pressure	/ 0 5 (psig	psig	psig
CASING / TUBING	ANNULUS	PRESSURE	RECORD
0 minutes	1790 psig	psig	psig
5 minutes	1790 psig	psig	psig
10 minutes	1790 psig	psig	psig
15 minutes	1790 psig	psig	psig
20 minutes	1790 psig	psig	psig
25 minutes	1790 psig	psig	psig
30 minutes	/790 psig	psig	psig
5 Hours minutes	1790 psig	psig	psig
minutes	psig	psig	psig
RESULT	[] Pass []Fall	[] Pass []Fail	[] Pass []Fail





October 26, 2016

RECEIVED

NOV 0 9 2016

Office of Enforcement, Compliance and Environmental Justice (Water)

Don Breffle Mail Code: 8ENF-UFO US EPA Region 8 1595 Wyncoop Street Denver, CO 80202-1129

0720736-04503

RE: Underground Injection Control (UIC)

Notice of Violation

Loss of Mechanical Integrity Well No. Ute Tribal 16-10 Antelope Creek Oil Field Duchesne County, Utah

Mr. Breffle:

Please find enclosed an MIT dated 10/26/16 related to our earlier notice that, on August 29, 2016, Petroglyph Operating lost Mechanical Integrity on the Ute Tribal 16-10 Injection Well.

My direct number is (208) 685-9711 for more information, if needed.

Sincerely,

Petroglyph Operating Company, Inc.

Nicole Colby

Manager, Land & Regulatory Compliance

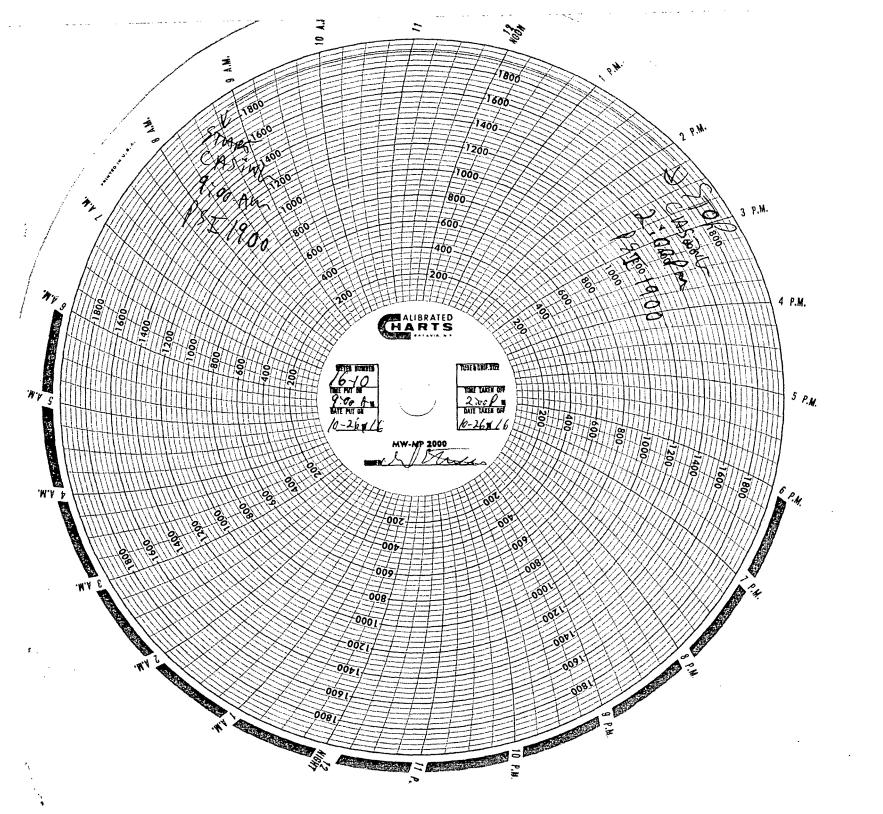
GREEN BLUE OBI

Mechanical Integrity Test Tubing/Casing Annulus Pressure Test U.S. Environmental Protection Agency Underground Injection Control Program 1595 Wynkoop Street, Denver, CO 80202

EPA Witness: Date:											
Test conducted by: C.A.	HAD STEVENSON										
Others present:	—										
Well Name: 16-10		Type: ER SWD	Status: AC TA UC								
Field: ANTELOIL	CREEK	· / / / / / / / / / / / / / / / / / / /									
	The state of the s										
Operator: PETROGLYPH EWERY											
Last MIT: / / Maximum Allowable Pressure: PSIC											
Regularly scheduled test? [] Yes [] No											
MIT DATA TABLE	Test #1	Test #2	Test #3								
	1036 #1										
TUBING		PRESSURE	RECORD								
Initial Pressure	/2,90 psig	psig	psig								
End of test pressure	1280 psig	psig	psig								
CASING / TUBING	ANNULUS	PRESSURE	RECORD								
0 minutes	/900 psig	psig	psig								
5 minutes	/901 psig	psig	psig								
10 minutes	/900 psig	psig	psig								
15 minutes	/960 psig	psig	psig								
20 minutes	1900 psig	psig	psig								
25 minutes	1900 psig	psig	psig								
30 minutes	1908 psig	psig	psig								
5 Newls minutes	1900 psig	psig	psig								
minutes	psig	psig	psig								
RESULT	[] Pass []Fail	[] Pass []Fail	[] Pass []Fail								

Does the annulus pressure build back up after the test? If Yes,

psiq.



OMB No. 2040-0042 United States Environmental Protection Agency Washington, DC 20460 ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT Name and Address of Existing Permittee Petroglyph Operating Company, Inc. 2258 Name and Address of Surface Owner P.O. Box 7608 P.O. Box 70 Boise, Idaho 83709 Ft. Duchesne, Utah, 84026 County Permit Number Locate Well and Outline Unit on Utah Duchesne UT2736-04434 04503 Section Plat - 640 Acres Surface Location Description 1/4 of NW 1/4 of SE 1/4 of Section 16 Township 5S Range 3W Locate well in two directions from nearest lines of quarter section and drilling unit Location 1728 ft. frm (N/S) S Line of quarter section and 1881ft. from (E/W) E Line of quarter section. TYPE OF PERMIT WELL ACTIVITY Individual Brine Disposal X Enhanced Recovery Hydrocarbon Storage Number of Wells Well Number UTE TRIBAL 16-10 Lease Name Ute Indian Tribe TUBING - CASING ANNULUS PRESSURE INJECTION PRESSURE TOTAL VOLUME INJECTED (OPTIONAL MONITORING) MAXIMUM PSIG MONTH YEAR AVERAGE PSIG **MAXIMUM PSIG** BBL MINIMUM PSIG 1927 513 0 0 January 15 1958 0 0 February 15 1947 1957 462 1970 1989 622 0 0 March 15 15 1953 1985 579 0 0 April 0 0 15 1958 1973 428 May June 15 1941 1980 340 0 0 1995 503 0 0 July 15 1975 1981 1847 385 0 0 15 August 0 0 15 1950 316 September 1973 0 October 15 1959 1971 364 0 November 15 1951 1959 337 0 0 December 15 1962 1978 388 0 0 Certification I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32) Name and Official Title (Please type or print) Date Signed Signature Chad Stevenson, Water Facilities Supervisor 02/08/2016 BLUE CBI EPA Form 7520-11 (Rev. 12-11)

TAB

Multi-Chem Analytical Laboratory

1553 East Highway 40 Vernal, UT 84078

Units of Measurement: Standard



Water Analysis Report

Production Company:

PETROGLYPH OPERATING CO INC - EBUS

Well Name:

UTE TRIBAL 16-10 INJ, DUCHESNE

Sample Point:

Well Head

Sample Date: Sample ID:

1/6/2016 WA-327638

Sales Rep: James Patry

Lab Tech: Michele Pike

> Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specif	ics		Analysis @ Pro	perties in Sample Specifics	
Test Date:	1/14/2016	Cations	mg/L	Anions	mg/L
System Temperature 1 (°F):	60	Sodium (Na):	6704.84	Chloride (CI):	9000.00
System Pressure 1 (psig):	2000	Potassium (K):	26.82	Sulfate (SO ₄):	220.00
System Temperature 2 (°F):	180	Magnesium (Mg):	25.78	Bicarbonate (HCO3):	2440.00
System Pressure 2 (psig):	50	Calcium (Ca):	58.86	Carbonate (CO ₃):	
Calculated Density (g/ml):	1.0101	Strontium (Sr):	6.57	Acetic Acid (CH ₃ COO)	
pH:	8.50	Barium (Ba):	6.74	Propionic Acid (C ₂ H ₅ COO)	
Calculated TDS (mg/L):	18539.07	Iron (Fe):	18.84	Butanoic Acid (C ₃ H ₇ COO)	
CO2 in Gas (%):		Zinc (Zn):	3.39	Isobutyric Acid ((CH ₃) ₂ CHCOO)	
Dissolved CO ₂ (mg/L)):	0.00	Lead (Pb):	0.94	Fluoride (F):	
H ₂ S in Gas (%):		Ammonia NH3:		Bromine (Br):	
H2S in Water (mg/L):	20.00	Manganese (Mn):	0.06	Silica (SiO ₂):	26.23
Tot. SuspendedSolids(mg/L):		Aluminum (Al):	0.03	Calcium Carbonate (CaCO₃):	
Corrosivity(LanglierSat.Indx)	0.00	Lithium (Li):	1.38	Phosphates (PO4):	8.94
		Boron (B):	4.55	Oxygen (O2):	
Alkalinity:		Silicon (Si):	12.26	,	
Notes:					

(PTB = Pounds per Thousand Barrels)

			cium onate	Bariun	n Sulfate		ron Ifide		on onate		psum 4·2H2O		estite SO4		alite aCl		inc Ifide
Temp (°F)	PSI	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ -	SI	РТВ
180.00	50.00	1.93	50.26	1.01	3.62	4.40	10.39	3.58	13.69	0.00	0.00	0.00	0.00	0.00	0.00	10.61	1.77
167.00	267.00	1.85	49.95	1.04	3.64	4.39	10.39	3.49	13.69	0.00	0.00	0.00	0.00	0.00	0.00	10.74	1.77
153.00	483.00	1.79	49.67	1.07	3.67	4.40	10.39	3.40	13.69	0.00	0.00	0.00	0.00	0.00	0.00	10.89	1.77
140.00	700.00	1.73	49.37	1.11	3.70	4.43	10.39	3.32	13.69	0.00	0.00	0.00	0.00	0.00	0.00	11.06	1.77
127.00	917.00	1.68	49.05	1.17	3.74	4.47	10.39	3.24	13.69	0.00	0.00	0.00	0.00	0.00	0.00	11.24	1.77
113.00	1133.00	1.63	48.71	1.23	3.77	4.52	10.39	3.15	13.69	0.00	0.00	0.00	0.00	0.00	0.00	11.44	1.77
100.00	1350.00	1.58	48.37	1.31	3.81	4.59	10.39	3.07	13.69	0.00	0.00	0.00	0.00	0.00	0.00	11.66	1.77
87.00	1567.00	1.54	48.03	1.40	3.85	4.67	10.39	2.98	13.68	0.00	0.00	0.00	0.00	0.00	0.00	11.90	1.77
73.00	1783.00	1.50	47.69	1.51	3.89	4.77	10.40	2.89	13.68	0.00	0.00	0.00	0.00	0.00	0.00	12.15	1.77
60.00	2000.00	1.47	47.36	1.64	3.92	4.88	10.40	2.81	13.67	0.00	0.00	0.00	0.00	0.00	0.00	12.43	1.77

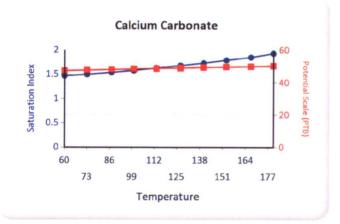


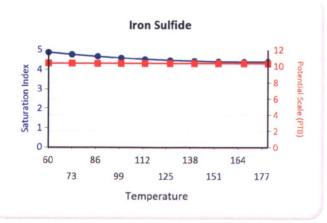
Water Analysis Report

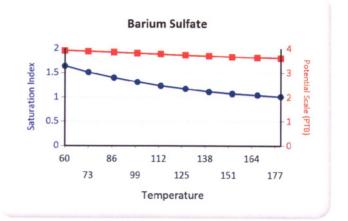
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.66	2.27	11.33	0.38	6.67	47.51	3.76	32.50	13.41	14.65
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.52	2.27	11.57	0.38	6.07	45.12	3.42	30.86	12.99	14.65
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38	2.27	11.83	0.38	5.51	42.71	3.10	29.21	12.62	14.65
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.23	2.26	12.12	0.38	4.95	39.88	2.79	27.29	12.25	14.65
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	2.07	2.26	12.43	0.38	4.39	36.67	2.47	25.11	11.88	14.65
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	2.25	12.77	0.38	3.81	33.12	2.16	22.72	11.52	14.65
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72	2.23	13.13	0.38	3.24	29.24	1.84	20.13	11.17	14.65
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	2.21	13.53	0.38	2.65	25.01	1.52	17.35	10.81	14.64
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31	2.17	13.96	0.38	2.06	20.37	1.21	14.35	10.47	14.64
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	2.09	14.42	0.38	1.45	15.24	0.89	11.10	10.12	14.64

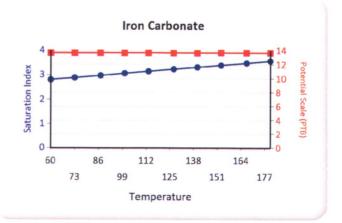
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate





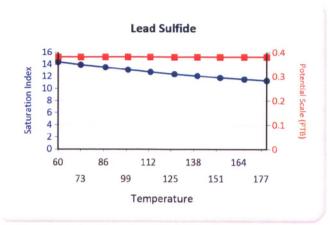


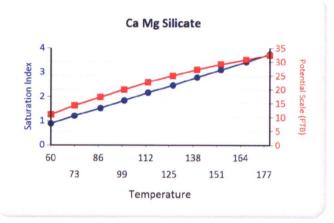


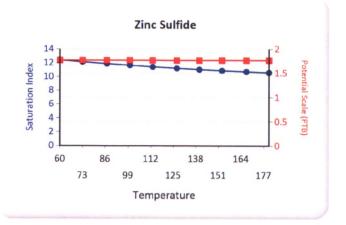
Excellence

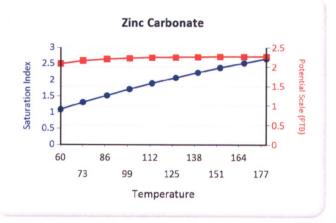


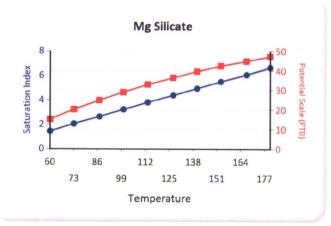
Water Analysis Report







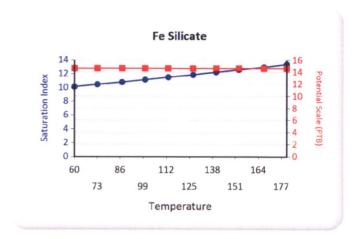




1553 East Highway 40 Vernal, UT 84078



Water Analysis Report





September 20, 2016

RECEIVED

OCT 03 2016

Office of Enforcement, Compliance and Environmental Justice (UFO)

Don Breffle Mail Code: 8ENF-UFO US EPA Region 8 1595 Wyncoop Street Denver, CO 80202-1129

> RE: Underground Injection Control (UIC)

> > Notice of Violation

Loss of Mechanical Integrity Well No. Ute Tribal 16-10 Antelope Creek Oil Field Duchesne County, Utah

V120736-04503

Mr. Breffle:

Please be advised that on August 29, 2016, Petroglyph Operating lost Mechanical Integrity on the Ute Tribal 16-10 Injection Well. Details regarding cause and our analysis will be forthcoming.

My direct number is (208) 685-9711 for more information, if needed.

Sincerely,

Petroglyph Operating Company, Inc.

Nicole Colby

Manager, Land & Regulatory Compliance

U2 Entered

Date Loblic Initial _______

GREEN BLUE CBI



September 21, 2016

Don Breffle Mail Code: 8ENF-UFO US EPA Region 8 1595 Wyncoop Street Denver, CO 80202-1129

RE: Underground Injection Control (UIC)
Notice of Violation
Loss of Mechanical Integrity
EPA Permit #UT2736-04327
Well No. Ute Tribal 05-16
Antelope Creek Oil Field
Duchesne County, Utah

Mr. Breffle:

Please be advised that on August 7, 2016, Petroglyph Operating lost Mechanical Integrity on the Ute Tribal 05-16 Injection Well. Please find enclosed a Mechanical Integrity Test indicating resolution.

From our analysis, it appears the by-pass O-ring failed. Petroglyph Operating staff:

• Replaced Pkr, tested all tbg to 3500psi BHP, with rig MIT test to 2000psi.

My direct number is (208) 685-9711 for more information, if needed.

Sincerely,

Petroglyph Operating Company, Inc.

Nicole Colby

Manager, Land & Regulatory Compliance

Entered

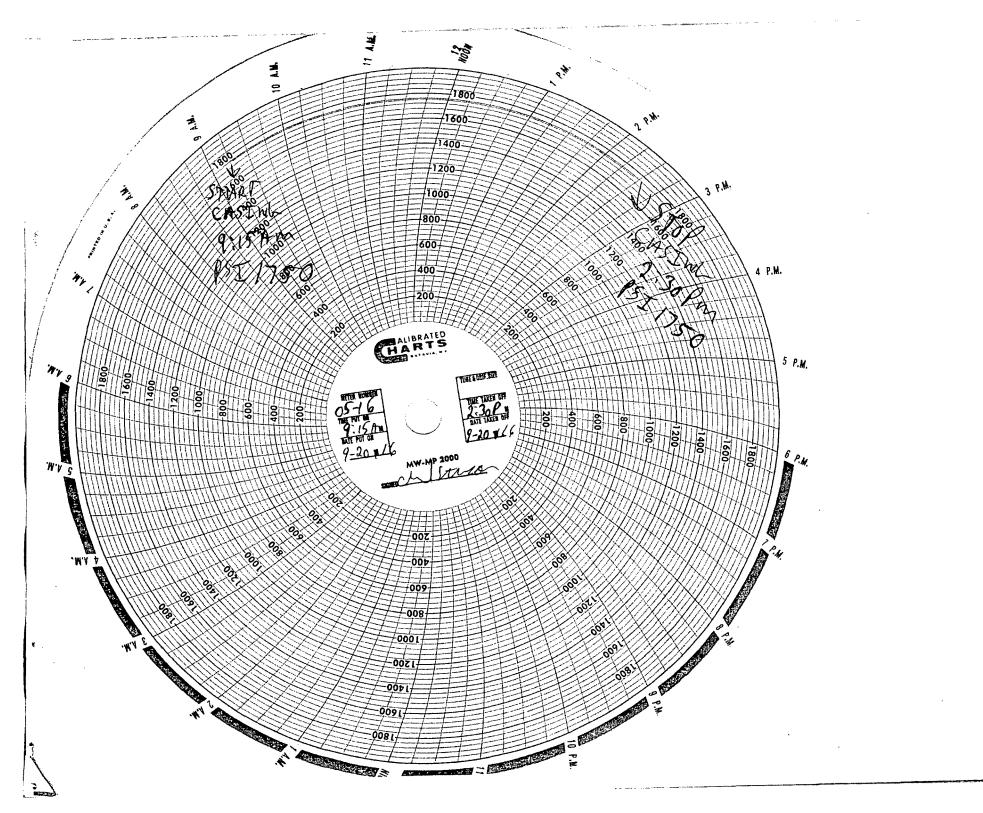
e 6/3/14

GREEN BLUE CBI

Mechanical Integrity Test Tubing/Casing Annulus Pressure Test U.S. Environmental Protection Agency Underground Injection Control Program 1595 Wynkoop Street, Denver, CO 80202

EPA Witness: Test conducted by: UHAN STEVE WSON Others present:	Date:	
Well Name: 05-16 Field: ANTELOPE CREEK	Type: ER SWD Status: AC	TA UC
	_E / W County: <u>DUC NES NE</u> State	:UT
Last MIT: / / / Maximum Allow	vable Pressure:	PSIG
Regularly scheduled test? Initial test for permit? Test after well rework?	• •	
Well injecting during test? If Yes, rate: Pre-test annulus pressure:	<u>bpd</u> psig	

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING	·	PRESSURE	RECORD
Initial Pressure	700 psig	psig	psig
End of test pressure	7.00 psig	psig	psig
CASING / TUBING	ANNULUS	PRESSURE	RECORD
0 minutes	/750 psig	psig	psig
5 minutes	/750 psig	psig	psig
10 minutes	1750 psig	psig	psig
15 minutes	1750 psig	psig	psig
20 minutes	1750 psig	psig	psig
25 minutes	1750 psig	psig	psig
30 minutes	1750 psig	psig	psig
5 Hours minutes	1750 psig	psig	psig
minutes	psig	psig	psig
RESULT	[] Pass []Fail	[] Pass []Fail	[] Pass []Fail



Permit Number

United States Environmental Protection Agency Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee Petroglyph Operating Company, Inc. 2258 P.O. Box 7608

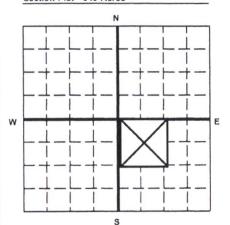
Boise, Idaho 83709

Name and Address of Surface Owner Ute Indian Tribe

P.O. Box 70

Ft. Duchesne, Utah 84026 County

Locate Well and Outline Unit on Section Plat - 640 Acres



Utah		Duchesne		UT27	UT2736-04503			
Surface Local	tion Description				***************************************			
1/4 of	1/4 of NW 1/4	of SE 1/4	of Section 16	Townshir	55	Range	3W	

Locate well in two directions from nearest lines of quarter section and drilling unit

State

Location 1728ft. frm (N/S) S Line of quarter section and 1881ft. from (E/W) E Line of quarter section.

WELL ACTIVITY

TYPE OF PERMIT

Number of Wells 111

Brine Disposal

Individual

X Enhanced Recovery Hydrocarbon Storage X Area

Lease Name Ute Indian Tribe

Well Number UTE TRIBAL 16-10

INJECTION	PRESSURE

TOTAL VOLUME INJECTED

TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)

	INJECTION PRESSURE		TOTAL VOLUME INJECTED		(OF HOMAL MONTONING)	
MONTH YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
14	1601	1609	0		0	0
14	1599	1606	0		0	0
14	1812	1960	756		0	0
14	1975	2002	827		0	0
14	1965	1966	613		0	0
14	1954	1975	463		0	0
14	1959	2003	435		0	0
14	1975	1990	482		0	0
r 14	1959	2000	423		0	0
14	1973	1985	424		0	0
14	1974	1988	300		0	0
14	1952	2010	198		0	0
	14 14 14 14 14 14 14 14 14 14 14 14	AVERAGE PSIG 14	EAR AVERAGE PSIG MAXIMUM PSIG 14 1601 1609 14 1599 1606 14 1812 1960 14 1975 2002 14 1965 1966 14 1954 1975 14 1959 2003 14 1975 1990 r 14 1973 1985 14 1974 1988	EAR AVERAGE PSIG MAXIMUM PSIG BBL 14 1601 1609 0 14 1599 1606 0 14 1812 1960 756 14 1975 2002 827 14 1965 1966 613 14 1954 1975 463 14 1959 2003 435 14 1975 1990 482 r 14 1973 1985 424 14 1974 1988 300	EAR AVERAGE PSIG MAXIMUM PSIG BBL MCF 14 1601 1609 0 14 1599 1606 0 14 1812 1960 756 14 1975 2002 827 14 1965 1966 613 14 1954 1975 463 14 1959 2003 435 14 1975 1990 482 r 14 1959 2000 423 14 1973 1985 424 14 1974 1988 300	EAR AVERAGE PSIG MAXIMUM PSIG BBL MCF MINIMUM PSIG 14 1601 1609 0 0 14 1599 1606 0 0 14 1812 1960 756 0 14 1975 2002 827 0 14 1965 1966 613 0 14 1954 1975 463 0 14 1959 2003 435 0 14 1975 1990 482 0 r 14 1959 2000 423 0 14 1973 1985 424 0 14 1974 1988 300 0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

Signature

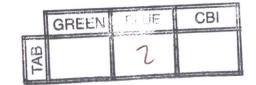
Date Signed

Chad Stevenson, Water Facilities Supervisor

2/10/2015

EPA Form 7520-11 (Rev. 12-08)

U2 Entered
Date



Multi-Chem Analytical Laboratory

1553 East Highway 40 Vernal, UT 84078

multi-chem'

A HALLIBURTON SERVICE

mg/L

3000.00 201.00 1830.00

21.97

Units of Measurement: Standard

Water Analysis Report

Production Company:

PETROGLYPH OPERATING CO INC - EBUS

UTE TRIBAL 16-10 INJ, DUCHESNE

WELLHEAD

Sample Point: Sample Date: Sample ID:

Well Name:

1/7/2015 WA-297505 Sales Rep: **James Patry**

Lab Tech: **Gary Winegar**

> Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specific	:\$		Analysis @ Pro	perties in Sample Specifics	
Test Date:	1/14/2015	Cations	mg/L	Anions	
System Temperature 1 (°F):	160	Sodium (Na):	2015.55	Chloride (CI):	
System Pressure 1 (psig):	1300	Potassium (K):	29.81	Sulfate (SO4):	
System Temperature 2 (°F):	80	Magnesium (Mg):	38.79	Bicarbonate (HCO3):	
System Pressure 2 (psig):	15	Calcium (Ca):	63.50	Carbonate (CO3):	
Calculated Density (g/ml):	1.0021	Strontium (Sr):	4.99	Acetic Acid (CH3COO)	
pH:	8.00	Barium (Ba):	2.78	Propionic Acid (C2H5COO)	
Calculated TDS (mg/L):	7209.07	Iron (Fe):	0.50	Butanoic Acid (C3H7COO)	
CO2 in Gas (%):		Zinc (Zn):	0.07	Isobutyric Acid ((CH3)2CHCOO)	
Dissolved CO ₂ (mg/L)):	5.00	Lead (Pb):	0.04	Fluoride (F):	
H ₂ S in Gas (%):		Ammonia NH3:		Bromine (Br):	
H2S in Water (mg/L):	20.00	Manganese (Mn):	0.07	Silica (SiO2):	

Notes:

B=4.63 Al=.01 Li=1.0

(PTB = Pounds per Thousand Barrels)

			cium onate	Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4-2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	Si	РТВ	SI	РТВ	SI	РТВ
80.00	14.00	1.32	46.75	1.53	1.61	2.90	0.28	1.13	0.34	0.00	0.00	0.00	0.00	0.00	0.00	10.14	0.04
88.00	157.00	1.29	45.76	1.45	1.60	2.79	0.28	1.13	0.34	0.00	0.00	0.00	0.00	0.00	0.00	9.92	0.04
97.00	300.00	1.32	46.31	1.37	1.58	2.74	0.28	1.18	0.34	0.00	0.00	0.00	0.00	0.00	0.00	9.77	0.04
106.00	443.00	1.34	46.89	1.30	1.57	2.70	0.28	1.24	0.34	0.00	0.00	0.00	0.00	0.00	0.00	9.63	0.04
115.00	585.00	1.37	47.47	1.24	1.56	2.66	0.28	1.29	0.34	0.00	0.00	0.00	0.00	0.00	0.00	9.49	0.04
124.00	728.00	1.40	48.06	1.18	1.55	2.64	0.28	1.34	0.35	0.00	0.00	0.00	0.00	0.00	0.00	9.37	0.04
133.00	871.00	1.43	48.65	1.13	1.53	2.62	0.28	1.40	0.35	0.00	0.00	0.00	0.00	0.00	0.00	9.25	0.04
142.00	1014.00	1.47	49.22	1.08	1.52	2.61	0.28	1.45	0.35	0.00	0.00	0.00	0.00	0.00	0.00	9.15	0.04
151.00	1157.00	1.50	49.79	1.04	1.50	2.60	0.28	1.50	0.35	0.00	0.00	0.00	0.00	0.00	0.00	9.05	0.04
160.00	1300.00	1.54	50.32	1.00	1.49	2.61	0.28	1.55	0.35	0.00	0.00	0.00	0.00	0.00	0.00	8.95	0.04
		RECEIPT THE SAME STATE	nydrate ~0.5H2O		ydrate SO4		cium oride	Zinc Carbonate			ead Ifide		Mg icate	CONTRACTOR OF THE PARTY OF THE	a Mg licate	E0000000000000000000000000000000000000	Fe icate
Temp (°F)	PSI	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.17	0.02	0.00	0.00	0.00	0.00	3.02	0.35
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.84	0.02	0.00	0.00	0.00	0.00	2.96	0.35
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.58	0.02	0.36	2.32	0.00	0.00	3.22	0.35
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.34	0.02	0.79	4.98	0.00	0.00	3.49	0.36

	160.00	1300.00	0.00	0.
Min	lti-Chem	- A Hallib	urton Se	rvice

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0.02

1.23

1.67

2.12

2.57

3.03

3.48

7.73

10.53

13.33

16.05

18.57

20.80

0.08

0.33

0.58

0.84

1.10

1.36

0.66

2.17

3.67

5.15

6.56

7.87

0.37

0.37

0.38

0.38

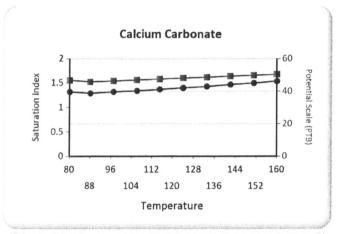
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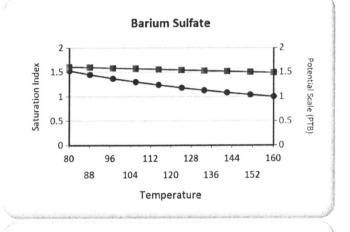
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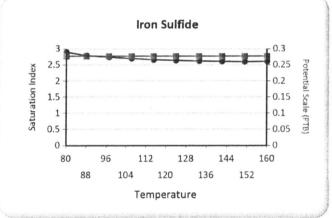
Water Analysis Report

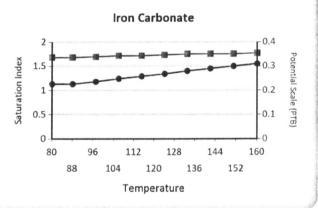
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Lead Sulfide Fe Silicate

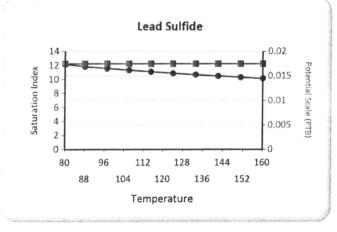
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

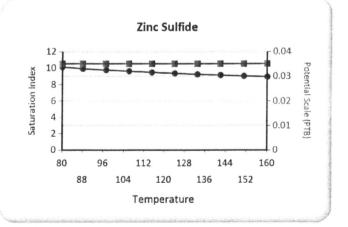




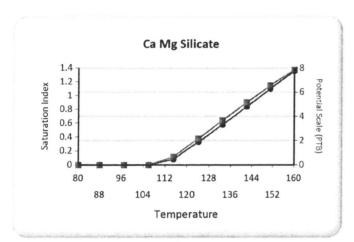


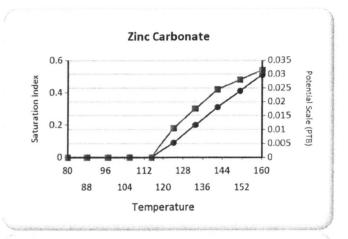


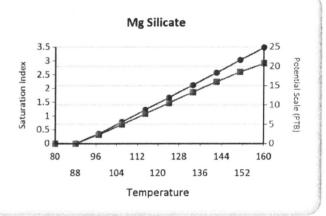


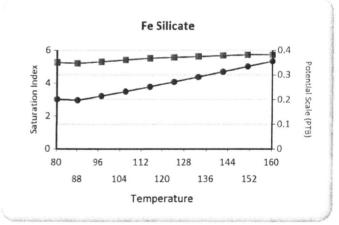


Water Analysis Report









Innovation

RECEIVED

NOV 24 2015

Office of Enforcement, Compliance and Environmental Justice (UFO)

November 17, 2015

Gary Wang Mail Code: 8ENF-UFO US EPA Region 8 1595 Wyncoop Street Denver, CO 80202-1129

RE: EPA AREA PERMIT NO. UT2736-04503

Mechanical Integrity Test

Standard Five year retesting for Ute Tribal 16-10

Mr. Breffle:

The enclose Mechanical Integrity Test was performed on the above referenced well on November 9, 2015. This MIT was performed because the well was due for the regular five year Mechanical Integrity Test.

If you need any more information please call at (435) 722-5302.

Sincerely,

Petroglyph Operating Co., Inc.

Rodrigo Jurado

Regulatory Compliance Specialist

Encl: MIT for the Ute Tribal 16-10

GREEN BLUE CBI

U2 Entered

Date 12(4)15

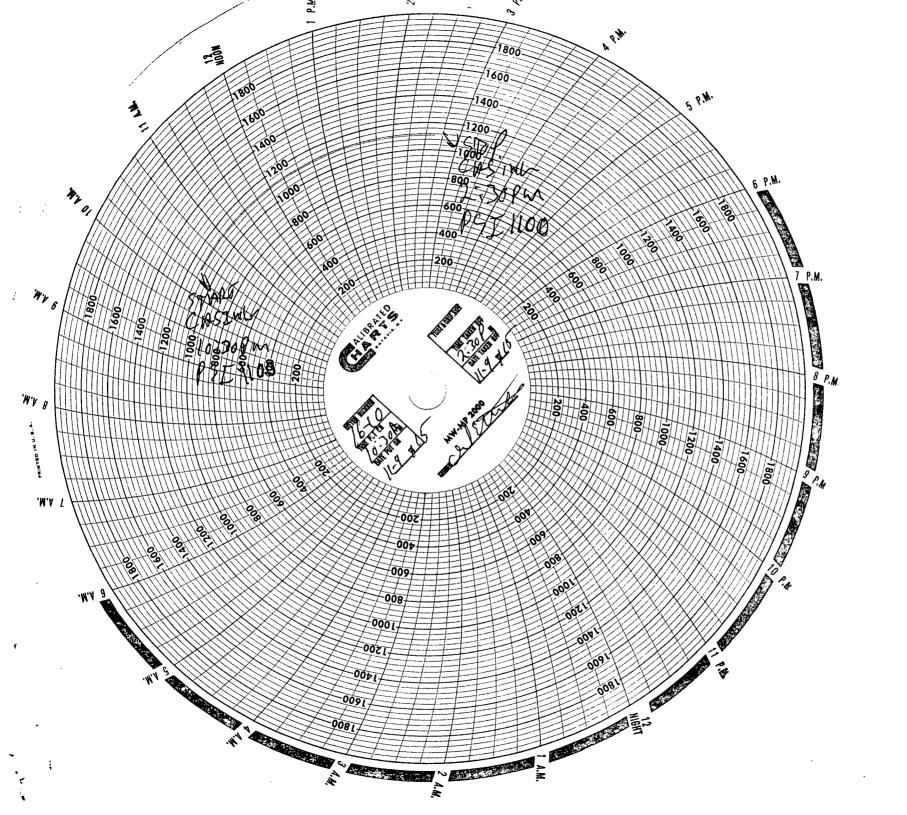
Initial

03

Mechanical Integrity Test Tubing/Casing Annulus Pressure Test U.S. Environmental Protection Agency Underground Injection Control Program 1595 Wynkoop Street, Denver, CO 80202

EPA Witness: Test conducted by: Others present:	Date:
Well Name: 16-10 Field: AWTEL OPE CREEK	Type: ER SWD Status: AC TA UC
	E/W County: DCL CHES NE State: (N)
	owable Pressure: PSIG
Regularly scheduled test? Initial test for permit? Test after well rework?	• • • •
Well injecting during test? If Yes, rate:	<u>/2bpd</u>
Pre-test annulus pressure:	psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		PRESSURE	RECORD
Initial Pressure	/957 psig	psig	psig
End of test pressure	1957 psig	psig	psig
CASING / TUBING	ANNULUS	PRESSURE	RECORD
0 minutes	<i>1100</i> psig	psig	psig
5 minutes	// psig	psig	psig
10 minutes	1100 psig	psig	psig
15 minutes	[[Od psig	psig	psig
20 minutes	lloo psig	psig	psig
25 minutes	1100 psig	psig	psig
30 minutes	UOO psig	psig	psig
4 Hours minutes	[(0d psig	psig	psig
minutes	psig	psig	psig
RESULT	[] Pass []Fail	[] Pass []Fail	[] Pass []Fail



⊕EPA

United States Environmental Protection Agency Washington, DC 20460

Washington, DC 20400

VLIA	ANNUAL DIS	POSAL/INJEC	CTION WELL	MONITORI	NG REPORT							
Name and Address of E Petroglyph Operatin P.O. Box 7608 Boise, Idaho 83709	Existing Permittee ng Company, Inc. 2258		P.O. Box	Address of Surface (in Tribe : 70 esne, Utah 84026	Owner							
Locate Well and (Section Plat - 640		State Utah		County Duchesne	Permit Nu UT2736-							
Section Plat - 040	N	Surface L	Surface Location Description									
		1/4 0			ction 16 Township 55							
		Surface Location	1728ft. frm (N/S)	t. frm (N/S) S Line of quarter section m (E/W) E Line of quarter section								
w 		E WELL	L ACTIVITY	TYPE OF PER	RMIT							
 	- X - -	District Control of the Control of t	rine Disposal inhanced Recovery	Individua	ı							
	- -	Consession	ydrocarbon Storage	-	ells 111							
 		Leas	e Name Ute Indian	Tribe	Well Number UTE	TRIBAL 16-10						
	s											
	INJECTION	DDECCUDE	TOTAL VOLU	ME IN IECTED		ANNULUS PRESSURE						
MONTH YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	ME INJECTED MCF	(OPTIONAL MONITORING) MINIMUM PSIG MAXIMUM PSIG							
January 13	1900	1968	197		0	0						
February 13	1951	1988	403		0	0						
March 13	1822	1915	84		0	0						
April 13	1720	1742	0		0	0						
May 13	1688	1703	0		0	0						
June 13	1675	1680	0			0						
July 13	1664	1666	0		0	0						
August 13	1644	1652				O section and the contract of						
September 13	1629	1639	0		0	0						
October 13	1624	1624	0		0	0						
November 13	1623	1622	0		0	0						
December 13	1607	1618	0		0	0						
attachments and information is tru possibliity of find	e penalty of law that I h that, based on my inqu ue, accurate, and comple a and imprisonment. (R	ave personally examine iry of those individuals ete. I am aware that the ef. 40 CFR 144.32)	s immediately responere are significant p	nsible for obtaining	the information, I believing false information, inc	e that the cluding the						
Name and Official Title			nature	1	Da	2/11/2014						
Cliad Stevensor	n, Water Facilities	Supervisor	2/1/	Motorale	med	2/11/2014						
EPA Form 7520-11 (Rev	. 12-08)	entant automotivamental productiva de actividad de la composita de la composita de la composita de la composita Antido de la composita della c	0	Doto	3/18/14							

Date

3/18/14

Multi-Chem Analytical Laboratory

1553 East Highway 40 Vernal, UT 84078

multi-chem[®]

A HALLIBURTON SERVICE

Units of Measurement: Standard

Water Analysis Report

Production Company: PETROGLYPH ENERGY INC

Well Name: Sample Point:

UTE TRIBAL 16-10 INJ

Wellhead

Sample Date: Sample ID:

1/8/2014 WA-263377

Sales Rep: James Patry

Lab Tech: Gary Winegar

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	5
Test Date:	1/15/2014
System Temperature 1 (°F):	180
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	60
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.001
pH:	9.00
Calculated TDS (mg/L):	6071.25
CO2 in Gas (%):	
Dissolved CO ₂ (mg/L)):	0.00
H ₂ S in Gas (%):	
H2S in Water (mg/L):	10.00

Analysis @ Properties in Sample Specifics									
Cations	mg/L	Anions	mg/L						
Sodium (Na):	1435.00	Chloride (CI):	3000.00						
Potassium (K):	19.00	Sulfate (SO ₄):	0.00						
Magnesium (Mg):	31.00	Bicarbonate (HCO ₃):	1537.20						
Calcium (Ca):	27.00	Carbonate (CO ₃):							
Strontium (Sr):	3.00	Acetic Acid (CH3COO)							
Barium (Ba):	7.00	Propionic Acid (C2H5COO)							
Iron (Fe):	1.00	Butanoic Acid (C3H7COO)							
Zinc (Zn):	0.00	Isobutyric Acid ((CH3)2CHCOO)							
Lead (Pb):	0.00	Fluoride (F):							
Ammonia NH3:		Bromine (Br):							
Manganese (Mn):	0.35	Silica (SiO2):	10.70						

Notes:

B = 3.2AI=0 Li=.65

(PTB = Pounds per Thousand Barrels)

			cium oonate	Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	PTB	SI	PTB	SI	РТВ
60.00	14.00	1.77	23.10	0.00	0.00	4.02	0.55	2.07	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	1.79	23.11	0.00	0.00	3.89	0.55	2.14	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	1.81	23.14	0.00	0.00	3.77	0.55	2.21	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	1.83	23.16	0.00	0.00	3.68	0.55	2.28	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	1.86	23.19	0.00	0.00	3.61	0.55	2.35	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	1.89	23.23	0.00	0.00	3.55	0.55	2.41	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.93	23.26	0.00	0.00	3.51	0.55	2.48	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.97	23.29	0.00	0.00	3.49	0.55	2.54	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	2.02	23.33	0.00	0.00	3.47	0.55	2.61	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	2.07	23.36	0.00	0.00	3.47	0.55	2.66	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

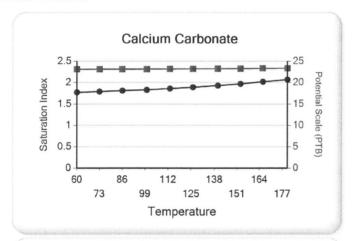
Excellence

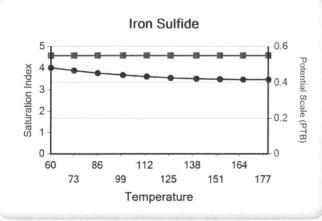
Water Analysis Report

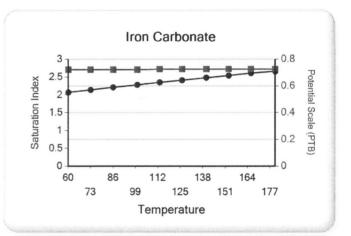
		CaSO ₁	hydrate 4~0.5H2 O	Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	РТВ	SI	РТВ	SI	РТВ	SI	РТВ	SI	PTB	SI	РТВ	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.02	12.69	1.72	5.68	8.43	0.78
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.52	12.81	1.96	5.94	8.66	0.78
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.03	12.89	2.22	6.16	8.92	0.78
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	12.93	2.49	6.33	9.21	0.78
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.10	12.95	2.77	6.46	9.53	0.78
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.64	12.96	3.06	6.55	9.85	0.78
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.18	12.97	3.35	6.61	10.19	0.78
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.72	12.97	3.64	6.66	10.54	0.78
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.25	12.97	3.94	6.69	10.89	0.78
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.77	12.97	4.22	6.71	11.24	0.78

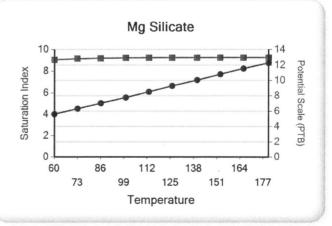
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Iron Sulfide Iron Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate. Iron Sulfide. Iron Carbonate. Mg Silicate. Ca Mg Silicate. Fe Silicate.







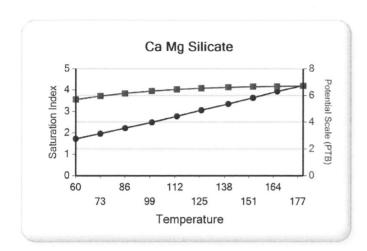


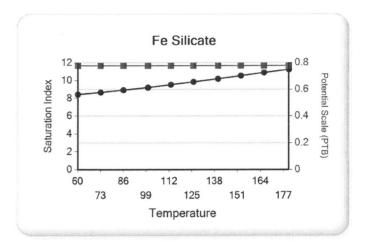
Multi-Chem Analytical Laboratory

1553 East Highway 40 Vernal, UT 84078

multi-chem

Water Analysis Report







UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466

FEB 2 6 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford Operations Coordinator Petroglyph Operating Company, Inc. P.O. Box 607 Roosevelt, UT 84066

Re: <u>AUTHORIZATION TO COMMENCE INJECTION</u>

Ute Tribal #16-10 (UT04503)

Antelope Creek Field

EPA AREA PERMIT UT2736-00000

Duchesne County, Utah

Dear Mr. Safford:

Thank you for submitting information pertaining to Ute Tribal #16-10 to the Environmental Protection Agency (EPA) Region VIII Ground Water Program. Requirements of UIC Area Permit UT2736-00000 Part II Sections (C)(2) "Prior To Commencing Injection" required submittal of the following information:

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UNITED STATES ENVIRONMENTAL P

ENVIRONMENTAL P 1 REGION 8 999 18TH STREET - SUITE Sean under DENVER, CO 80202-24 UT 20 736 - 04503 FEB 26 2001 220 Authorization to Injust - Final 2/26/2001

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Mr. Al Craver, Technical Enforcement Program, Mail Code 8ENF-T U.S. Environmental Protection Agency 999 18th Street, Suite 300 Denver, Colorado, USA, 80202-2466

If you have any questions concerning this authorization or the Permit, please contact Mr. Paul Osborne of my staff at 303.312.6125 or Mr. Craver at 303.312.7821.

D. Edwin Hogle

Director

Ground Water Program

cc: Mr. Ronald McCook, Chairman
 Uintah & Ouray Business Committee
 Ute Indian Tribe

Ms. Elaine Willie, Environmental Director Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Gil Hunt State of Utah Natural Resources Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
BLM - Vernal District Office

Z 159 952 303 US Fostal Service 2/27/01 CW 3939C -heceipt for Certified Mail 3940C 3940C No Insurance Coverage Provided Do not use for International Mail (See reverse) Mr. Micheal Safford Operations Coordinator Petroglyph Operating Co., Inc. P.O. BOX 607 Roosevelt, UT 84066 Special Delivery Fer Return Receipt Showing Wnom & Date Delivered PS Form 3800, April Return Receipt Showing to Whom Date, & Addressee's Address TOTAL Postage & Fees 15 Fostmark or Date

2/27/01 (Intificial wail to Michael Saffer Mailed together); Original green card. - (3939C)

1. UTE TRIBAL # 16-4 (UT2736-04557)

2. UTE TRIBAL # 16-10 (UT2736-04503)
(3940C)

2/27/01 CW 3939C- 3940C / UTA	TRIBAL #16-04 YUT273
SENDER: Complete items 1 and/or 2 for additional services. Complete items 3, and 4a & b. Print your name and address on the reverse of this form so return this card to you. Attach this form to the front of the mailpiece, or on the bac does not permit. Write "Return Receipt Requested" on the mailpiece below the action of the Return Receipt will show to whom the article was delivered delivered.	2 7 2001 I also wish to receive to following services (for an extension fee): 1. Addressee's Addresser's Addresse
	Consult postmaster for fee. 4a. Article Number
3. Article Addressed to: Mr. Micheal Safford Operations Coordinator Petroglyph Operating Co., Inc.	2. 159 952 303
Operations Coordinator	4b. Service Type
Petroglyph Operating Co., Inc.	Registered Insured
P.O. BOX 607	Certified COD
Roosevelt, UT 84066	Express Mail Return Receipt for Merchandise
	7. Date of Délivery
5. Signature (Addressee)	8. Addressee's Address Only if reques
E JUXA/JUXA/SSI	and fee is paid) freed of
6. Signature (Agent)	MAD 7 Ann

DOMESTIC RETURN RECEIPT

PS Form **3811**, December 1991 # v.s. GPO: 1993—352-714

Z 159 952 303 US Postal Service 2/27/01 CW 3939C - Receipt for Certified Mail 3940C No Insurance Coverage Provided. Do not use for International Mail (See reverse) Sent to Mr. Micheal Safford Operations Coordinator Petroglyph Operating Co., Inc. P.O. BOX 607 Roosevelt, UT 84066 Return Receipt Showing Whom & Date Delivered Return Receipt Showing to Whom, Date, & Addressee's Address \$ TOTAL Postage & Fees Postmark or Date

PS Form 3800, April



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

1 REGION 8 999 18TH STREET - SUITE 300 DENVER, CO 80202-2466

FEB 26 2001

Ref: 8P-W-GW

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D. Edwin Hogle

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Ground Water Program

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Ms. Elaine Willie, Environmental Director Ute Indian Tribe

Mr. Norman Cambridge BIA - Uintah & Ouray Agency

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Mr. Jerry Kenczka BLM - Vernal District Office



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

1 REGION 8 999 18TH STREET - SUITE 300 DENVER, CO 80202-2466

FEB 26 2001

CONCURRENCE COPY

Ref: 8P-W-GW

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1/20/01

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Concur

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